

Title (en)

Exhaust temperature raising apparatus and method for internal combustion engine

Title (de)

Vorrichtung und Verfahren zur Erhöhung der Abgastemperatur bei einer Brennkraftmaschine

Title (fr)

Appareil et méthode de chauffage d'échappement pour moteur à combustion interne

Publication

EP 1096126 B1 20051214 (EN)

Application

EP 00123124 A 20001025

Priority

JP 30438899 A 19991026

Abstract (en)

[origin: EP1096126A2] An exhaust temperature raising apparatus has an exhaust throttle valve (15) that adjusts the engine exhaust amount based on the amount of throttling, and an injector (12) that performs main injection and a sub-injection directly into a cylinder, a combination of an ECU (4), the injector (12), and the exhaust throttle valve (15) as exhaust gas temperature increase means for, during an engine warm-up, performing and controlling the exhaust throttling by the exhaust throttle valve and performing and controlling an exhaust gas temperature increase through combustion attributed to the main injection performed in an excess-air condition and combustion attributed to the sub-injection, an exhaust gas temperature sensor (16) that monitors a state of temperature increase of the exhaust gas caused by performance of the exhaust gas temperature increase means, and the ECU (4) as monitor means abnormality determination means for determining whether the exhaust gas temperature sensor (16) has an abnormality, and the ECU (4) as exhaust gas temperature increase stop means for stopping the operation of the exhaust gas temperature increase means when the ECU (4) determines that the exhaust gas temperature sensor (16) has an abnormality. <IMAGE>

IPC 1-7

F02D 41/40; **F02D 41/02**

IPC 8 full level

F01N 3/24 (2006.01); **F02D 9/04** (2006.01); **F02D 41/02** (2006.01); **F02D 41/06** (2006.01); **F02D 41/22** (2006.01); **F02D 41/34** (2006.01); **F02D 41/40** (2006.01); **F02D 43/00** (2006.01); **F02D 45/00** (2006.01)

CPC (source: EP US)

F02D 9/04 (2013.01 - EP US); **F02D 41/024** (2013.01 - EP US); **F02D 41/221** (2013.01 - EP US); **F02D 41/405** (2013.01 - EP US); **Y02T 10/12** (2013.01 - EP US); **Y02T 10/40** (2013.01 - EP US)

Cited by

ES2263340A1; JP2012117512A; EP1942262A3; EP1365137A4; EP1662123A3; EP1099843A3; CN109667680A; GB2382622A; GB2382622B; US6688101B2; US6536209B2; US9212587B2; WO2010003780A1; EP1942262A2; US7918084B2; EP1900928A4

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1096126 A2 20010502; **EP 1096126 A3 20020925**; **EP 1096126 B1 20051214**; DE 60024756 D1 20060119; DE 60024756 T2 20060817; JP 2001123870 A 20010508; JP 3633401 B2 20050330; US 6381952 B1 20020507

DOCDB simple family (application)

EP 00123124 A 20001025; DE 60024756 T 20001025; JP 30438899 A 19991026; US 69602400 A 20001026